List of Claims:

1. (currently amended) An imaging system comprising:

a first imager configured to capture an image of an object in a spatial domain and generate first spatial-domain image data, wherein the object is illuminated by an incoherent light source;

a spatial light modulator configured to receive the first spatial-domain image data and a beam of coherent light, and generate diffracted light rays;

a transform lens configured to transform the diffracted light rays into a diffraction pattern;

~~an~~ a second imager having an array of photocells, ~~where each photocell produces an electrical response to light exposure, and the electrical responses of the array of photocells together represent~~ wherein the second imager is configured to capture the diffraction pattern in a spatial frequency domain and generate spatial frequency-domain image data ~~representing an object illuminated with an incoherent light source~~; and

an image processor that receives the spatial frequency-domain image data from the second imager and transforms the spatial frequency-domain image data into a second spatial-domain image data~~, thereby reconstructing an image of the object~~.

2. (currently amended) The imaging system of claim 1, where the spatial frequency-domain image data contains noise, the system further comprising a filter that

detects and removes the noise before the system transforms the spatial frequency-domain image data into second spatial-domain image data.

3. (currently amended) The imaging system of claim 1, further comprising a user interface that displays both the second spatial-domain image data and the diffraction pattern.

4. (currently amended) The imaging system of claim 1, ~~further comprising an optical lens placed between a spatial representation of an image object and the imager,~~ wherein the ~~optical~~ transform lens ~~performing~~ performs an approximate Fourier transform on the diffracted light rays ~~light emanating from the spatial representation of the image object toward the imager~~.

5-14. (cancelled)

15. (currently amended) A method that minimizes point defects in an image, comprising:

illuminating an object using an incoherent light source;

capturing a first image of the object in a spatial domain;

generating first spatial-domain image data;

using a spatial light modulator configured to receive the first spatial-domain image data and a beam of coherent light, and generate diffracted light rays;

transforming the diffracted light rays into a diffraction pattern;

capturing ~~a~~ the diffraction pattern in a spatial frequency domain ~~of an image object illuminated by an incoherent source~~;

producing ~~digital~~ spatial frequency-domain image data corresponding to the captured diffraction pattern ~~of the object~~; and

converting the spatial frequency-domain image data into a second spatial domain image data~~, thereby reconstructing an image of the object~~.

16. (original) The method of claim 15, further comprising detecting and removing noise from the captured spatial frequency-domain image data.

17. (currently amended) The method of claim 15, further comprising transferring the spatial frequency-domain image data to an image processor, the image processor inverse Fourier transforming the frequency-domain image data into ~~a~~ the second spatial domain image data.

18. (currently amended) The method of claim 15, ~~further comprising placing~~ wherein the transforming is achieved by a transform lens ~~between an image object and the~~

~~digital imager, the transform lens~~ performing an approximate Fourier transform on the diffracted light rays ~~light traveling between the object and the digital imager~~.

19. (currently amended) The method of claim 15, further comprising storing the second spatial-domain image data in digital memory.

20. (currently amended) The method of claim 15, further comprising displaying both the second spatial-domain image data and the diffraction pattern.

21-22. (cancelled)